

## i

**FACTORS INFLUENCING MIS DESIGN IN SMALL AND MEDIUM SIZED  
ORGANIZATION: JORDANIAN PERSPECTIVE**

**A project submitted to the College Of Business in partial  
fulfillment of the requirement for the degree  
Master of Science Management  
Universiti Utara Malaysia**

**By**

**SAED ADNAN MUSTAFA**

**© Saed Adnan Mustafa, 2009. All Rights Reserved**

## TABLE OF CONTENTS

	Page
PERMISSION TO USE	V
ABSTRACT	VI
ACKNOWLEDGEMENTS	VII
LIST OF TABLES	IX
LIST OF FIGURES	X
LIST OF APPENDICES	XI
 <b>CHAPTER 1: INTRODUCTION</b>	
1.0 Introduction	1
1.1 Problem Statements	3
1.2 Research Questions	4
1.3 Research Objectives	4
1.4 Scope of Study	4
1.5 Significance of the Study	5
1.6 Outline of the Dissertation	5
1.7 Summary	6
 <b>CHAPTER 2: LITERATURE REVIEW</b>	
2.0 Introduction	7
2.1 Theoretical frameworks	8
2.2 Independent Variable	10
2.2.1 External Expertise	10
2.2.2 Organization Characteristics	11
2.2.3 Organization Action	11
2.2.4 System Characteristics	12
2.2.5 Internal Expertise	12
2.3 organizational Theory	15
2.4 Organization Structure	16
2.5 Organizational Culture	18
2.6 Organization Design	19
2.7 Related Work of MIS	19
2.8 Summary	26
 <b>CHAPTER 3: RESEARCH METHODOLOGY</b>	
3.0 Research Hypotheses	27
3.1 External Expertise and Computer Based Information System	27

3.2 Organization characteristics and Computer Based Information System	28
3.3 Organization action and Computer based Information System	29
3.4 System characteristics and Computer based Information System	29
3.5 Internal expertise and Computer based Information System	30
3.6 Overview of the methodology	31
3.6.1 Research model	31
3.7 Research Design	32
3.7.1 Population	32
3.7.2 The Sampling Technique	33
3.7.3 Instrumentation	33
3.7.4 Data Collection Procedure	35
3.7.5 Data Analysis	36
3.8 Summary	36

## **CHAPTER 4: RESEARCH FINDINGS**

4.0 Introduction	37
4.1 Profiles of Respondents	37
4.2 Descriptive Frequency of the Variable	39
4.3 Reliability of Variables and Measurements	39
4.3 Correlations among Variables	43
4.5 Multiple Regression Analysis	45
4.6 Results of Hypotheses Testing	47
4.6.1 Linear Regression of Organization Action with user satisfaction	47
4.6.2 Linear Regression of External expertise with user satisfaction	47
4.6.3 Linear Regression System characteristics with user satisfaction	48
4.6.4 Linear Regression of Important of CBIS with user satisfaction	49
4.6.5 Linear Regression of Internal expertise with user satisfaction	49
4.7 Summary	51

## **Chapter 5: DISCUSSIONS, RECOMENDATIONS AND CONCLUSSIONS**

5.0 Introduction	52
5.1 Discussions and Recommendation	53
5.2 Conclusion	55
5.3 Limitations of the Study	56

<b>REFERENCE</b>	57
------------------	----

<b>APPENDIX A</b>	62
-------------------	----

## **PERMISSION TO USE**

In presenting this thesis in partial fulfillment of the requirements for a postgraduate degree Master of Science Management from University Utara Malaysia, I agree that the university's library may it freely available for inspection. I further agree that permission for copying this thesis in any manner, in a whole or in a part, for scholarly purpose may be granted by my supervisor or in their absence, by the Dean of Faculty of college of business. It is understood that any copying or publication or use of this thesis or parts thereof for financial gain shall not be allowed without my written permission. It is also understood that due recognition shall be given to me and to University Utara Malaysia for any scholarly use which may be made of any material from my thesis.

Requests for permission to copy or to make other use of materials in this thesis, in whole or in part shall be addressed to:

**Dean,  
College Of Business  
University Utara Malaysia  
06010 Sintok  
Kedah Darul Aman**

## **ABSTRACT**

With the advent of the technological revolution, economic globalization and the fundamental change of the social production method, human capital and social capital have become the key factors for business organization to achieve competitive advantage (Li and Hu, 2007).

Management information system (MIS) is a system that provides the necessary information to manage an organization effectively. MIS and the information it generates are generally considered essential components of prudent and reasonable business decisions (Comptroller of the Currency Administrator of US National Banks, 1995).

The study conducted on SME's in Jordan to identify the factors that affect the adoption of MIS among these organizations. The results of the survey provide perspectives that have primarily not been explored in Jordanian organization.

In assessing factors influencing MIS design for small and medium sized organizations (Cronbach Alpha=0.893) developed by Campion (1988) we adopted them in the pilot-test and used in the research. In describing factors influencing MIS design for small and medium sized organizations in Jordan were taken for this purpose of this study.

Statistical analysis used were frequency counts, percentages, means, ANOVA, Person's, Multiple Regression Analysis and Linear correlation. Analysis was set at 0.05 level of significant using SPSS (Version 12.0) computer software.

Overall, the respondents "agreed" on the factors influencing MIS design for small and medium sized organizations

## **ACKNOWLEDGEMENTS**

First of all, my praise to Allah S.W.T whose blessing and guidance have helped me to complete my dissertation. Peace be upon our Prophet Mohammad S.A.W, who has given light to mankind.

My highest and most sincere appreciation goes to my beloved parents, brothers and sisters, who have always encouraged and guided me to be independent, and reached the highest peak of my aspirations. I will always be very grateful to my beloved father for providing, supporting, and advising me with great patience and attention in everything that I had done to complete not only this thesis but also my master program. Without this kind gesture, probably I would not have been satisfied with myself as I am now.

I hereby want to thank my supervisor, Mr. Shahamir Abdullah and my examiner Mr. Rajoo Ramanchandram, for their invaluable advice, constant guidance, great patience, understanding, insight, knowledge, attention, kindness and encouragement throughout my study in Universiti Utara Malaysia.

And here I like to express my high appreciation and full respect for the help I have gained from the UUM staff which made me able to reach this level of knowledge and made me ready to go for the next step of my graduate studies. I would like to thank Dr. Faridahwati Mohd Shamsudin, Prof Dr Zurni Bin Omar and Prof. Dr. Nor Hayati Bt Ahmad. thanks for giving me the hope and the strength by the way they handled me. their being there for me when I was down made me felt as if I was studying at home.

I would like to express my high appreciation to my lecturers in the College of Business, and to all my friends. Thanks again to everyone including those who I have probably forgotten to mention here.

**Said Adnan Mustafa**

16 November, 2009.



## LIST OF TABLE

Tables		Pages
Table 4.1	Profiles of Respondents	9
Table 4.2	Descriptive Statistics of the Dependent and the Independent Variables	10
Table 4.3	Reliability Statistic of Organization Action	11
Table 4.4	Reliability Statistic of External Expertise	12
Table 4.5	Reliability Statistic of System Characteristics	46
Table 4.6	Reliability Statistic of Important of CBIS	47
Table 4.7	Reliability Statistic of Internal Expertise	47
Table 4.8	Reliability Statistic of User Satisfaction	48
Table 4.9	Correlations among IV and DV	49
Table 4.10	Model Summary	49
Table 4.11	ANOVA(b)	50
Table 4.12	Coefficients (a)	50
Table 4.13	Linear Regression between Organization Action and user satisfaction	50
Table 4.14	Linear Regression between external expertise and user satisfaction	51
Table 4.15	Linear Regression between system characteristic and user satisfaction	51
Table 4.16	Linear Regression between importance of CBIS and user satisfaction	51
Table 4.17	Linear Regression between internal expertise and user satisfaction	52

## LIST OF FIGURE

Figures		Pages
Figure 2.1	Theoretical frameworks	12
Figure 2.2	Influences on utilize of IT in personnel	15
Figure 2.3	The relationship between organizational theory, organizational structure, culture and design	25
Figure 2.4	A simplified illustration of a centralized and decentralized structure	31
Figure 2.5	The interdependency of organizations and computerized information systems	31
Figure 3.1	Basic research model	32

## LIST OF APPENDICES

Appendix A	Questionnaires	62
------------	----------------	----

# CHAPTER ONE

## INTRODUCTION

### 1.0 Introduction

Rapid growth and convergence in current world constantly changing the power of control furthermore redesigning places a very high value for an organizations. The ability to efficiently deploy its existing recourses is an issue for organizations in all sizes. Thus implementation of the redesign process itself can be crucial when it comes to the future of the organization to produce value and to sustain its competitive advantage. Nevertheless, the way to re-formulate the organization thorough implement computerized information systems such as management information system (MIS). Designing computerized information system for organizations is a great challenge for the designer, because of the differences in organizational structures and cultures on every organization.

Druckman *et. al.*, (1997) stated that organization is constantly changing entity. It lives in an environment that is uncertain and unstable. In today's world of globalization, where things change in a fast pace and there is a huge flow of information, the flexibility and efficient ness of organizations has become more important than ever. The organization's possibility to succeed in today's marked has made the organization's ability to efficiently redesign itself crucial. (Johnson *et. al.*, 2005).

The contents of  
the thesis is for  
internal user  
only

## Reference

- A fzaal H., Md. Mahbubur & Mohd. Noah. (2000). An Empirical Investigation of Use of Information Technology among Small and Medium Business Organization: A Bruneian Scenario. The Electronic Journal on Information System in Developing Countries, <http://www.ejisdc.org>. pp1-17.
- Alvarez-Suescun E. (2007). Testing resource-based propositions about IS sourcing decisions. *Industrial Management & Data Systems*; Vol. 107 No. 6.
- Armstrong, B., Fogarty, G. & Dingsdag, D. (1999). Validation of Short a Computer User Satisfaction Questionnaire to Measure IS Success in Small Business. pp 1-20.
- Baloh, P. & Trkman, P. (2003). Influence of Internet and Information Technology on Work and Human Resource Management. *Informing Science*.
- Best, J. W., & Kahn, J. V. (2003). Research in Education (9<sup>th</sup> ed.). Boston: Pearson Education Inc.
- Clemons, E., K. (1986). Information systems for sustainable competitive advantage. *Information & Management*, Vol. 11, pp. 131-6.
- Chung-Shing, L., Christopher Lee, C. & He-Boong, K. (2006). A framework of outsourcing decision-making for human resource information systems. School of Business, Pacific Lutheran University Tacoma, Washington, U.S.A.
- Davidson G. (2005). Why HR outsourcing continues to expand: Successful companies excel by focusing on what they do best. *Human Resource Management International Digest*; Vol. 13 No. 3.
- Fisher, S.L., & Howell, A.W. (2004). Beyond user acceptance: an examination of employee reactions to information technology systems. *Human Resource Management*, Summer/Fall 2004, 43, (2&3), 243 – 258.

- Gasco, J. L., Juan, L. & Gonzalez, M. R. (2004). The use of information technology in training human resources: An e-learning case study. *Journal of European Industrial Training*, Vol. 28 No. 5.
- Gi-Ghin, W. (1998). An empirical study on the successful factors of human resource information systems. *Journal of Human Resource Development*, vol.10, pp.136-156.
- Hurlburt, R. T. (1994). *Comprehending Behavioral Statistics*. Pacific Grove, CA: Books/Cole.
- Kearns, D. (1997). A natural alliance: integrated vocational rehabilitation and human resource management. *Employee Relations*; Vol. 19, No. 2.
- Kinnie N. J. & Arthurs A. J. (1996). Personnel specialists' advanced use of information technology Evidence and explanations *Personnel Review*; Vol. 25 No. 3.
- Kirstie S. & Ball (2001). The use of human resource information systems: a survey. Vol.30 No. 6.
- Leary, M. R. (2004). *Introduction to Behavioral Research Methods* (4 ed.). Boston: Person Education Inc.
- Maris G. & Martinsons (1995). Knowledge-based systems leverage human resource management expertise. *International Journal of Manpower*; Vol. 16 No. 2.
- Maguire, S. & Redman, T. (2007). The role of human resource management in information systems development. *Management Decision*. Vol. 45 No. 2. pp. 252-264.
- Misra, H. (2006). Role of human resource in information technology alignment in organizations: A metric based strategic assessment framework. *Journal of Information Technology Management* Vol. 652, No.3.
- New Zealand Qualifications Authority (2003). Retrieved October, 16, 2003. From [Http://www.nzqa.govt.nz/nqfdocs/units/pdf/11531.pdf](http://www.nzqa.govt.nz/nqfdocs/units/pdf/11531.pdf)

Porter, M.E. & Millar, V.E. (1985). How information gives you competitive advantages. *Harvard Business Review*, Vol. 63 No. 4, pp. 149-60.

Sekaran, U, (1992). Research methods for Business: a Skills-Building Approach (4<sup>th</sup> ed.).

Sevilla, C. G., Ochave, J. A., Punsalan, T. G., Regala, B. P., & Uriarte, G. G. (1992). An Introduction to Research Methods. Manila: Book Store. In Fazli (2003). Work Stress amongst Secondary School Teacher in the State of Malacca: Implications to Human Resource Development. Unpublished MBA Thesis, Northern University of Malaysia, Malaysia.

Tansley C. & Newell S. (2007). Project social capital, leadership and trust: A study of human resource information systems development *Journal of Managerial Psychology*; Vol. 22, No. 4.

Tansley C., Newell S. & Williams H. (2001). Effecting HRM-style practices through an integrated human resource information system: An e-greenfield site? *Personnel Review*; Vol. 30 No. 3.

Thapisa, A.P.N. (1994). Human Resources Planning in Swaziland: Rolls-Royce versus Volkswagen Approaches *Library Management*; Vol. 15, No. 4.

Venkatraman, N. (1994). IT-enabled business transformation: from automation to business scope redefinition”, *Sloan Management Review*, Vol. 35 No. 2, pp. 73-87.

Yap, C. S., Soh, C. P. P. & Raman, K. S. (1992). Information Systems Success Factors in Small Business. *OMEGA International Journal of Management Science*, 20 (5/6), 597-600.

Chen, Q. & Cheng, H. (2008). Research on Resource-Based Management Information System Competencies and Strategies. *IEEE*.

Cameron, E. & Green, M., 2004, “Making Sense of Change Management: A Complete Guide to the Modeling, Tools and Techniques of Organisational Change”, Kor gan Page Limited, London

Jones, G. R., 1995, “Organizational Theory: text and cases”, Addison-Wesley Publishing



- Company, Inc, US
- Druckman, D., Singer, J. E., & Van Cott, H. (1997). *Enhancing Organizational Performance*, National Academies Press, Washington, D.C.
- Fisher, S.L., & Howell, A.W. (2004). Beyond user acceptance: an examination of employee reactions to information technology systems. *Human Resource Management*, Summer/Fall 2004, 43, (2&3), 243 – 258.
- Johnson, G., Scholes, K. & Whittington, R., (2005). *Exploring Corporate Strategy*; (7<sup>th</sup> edition), Pearson Education Limited, Essex.
- Li, Y. & Hu, L. (2007). The Impact of HRMIS on Enterprise Social Capital: A View from Social Network. *IEEE*.
- New Zealand Qualifications Authority (2003). Retrieved July, 16, 2003. From [Http://www.nzqa.govt.nz/nqfdocs/units/pdf/11531.pdf](http://www.nzqa.govt.nz/nqfdocs/units/pdf/11531.pdf)
- Olson, G., (2001). *Coordination Theory and Collaboration Technology*, Lawrence Erlbaum Associates Incorporated.
- Salaman, G., (2001). *Understanding Business: Organizations*, (3<sup>rd</sup> edition) Routledge, London.
- Pugh, D., (1990). *Organisational theory: Selected readings* (3<sup>rd</sup> edition), Penguin
- COTCOS, (2005). *Organisational Theory*. Retrieved 17 September 2009 from: <http://www.sv.cict.fr/cotcos/pjs/TheoreticalApproaches/Organ/OrganIntro.htm>
- Robbins, S. P., (1996). *Organizational Behavior: Concepts, controversies, Applications*. Prentice-Hall International, Inc, New Jersey
- Checkland, P. & Scholes, J., (2000). *Soft Systems Methodology in Action*. John Wiley & Son Ltd, West Sussex
- Checkland, P. & Holwell, S., (1999). *Information, Systems and Information Systems*. Retrieved 17 September 2009 from: [http://www.imprint.co.uk/C&HK/vol6/check-review\\_6-4.PDF](http://www.imprint.co.uk/C&HK/vol6/check-review_6-4.PDF)
- Montgomery CA. (1995). Of diamonds and rust: a new look at resources. In: Montgomery CA, editor. *Resource-based and evolutionary theories of them: towards a synthesis*. Norwell, MA: Kluwer Academic Publishers.
- Barney J. (1991). Firm resources and sustained competitive advantage. *Journal of Management* . Vol 17, No. 1, pp. 99-120.
- Foss NJ, Knudsen, C., Montgomery C., A. (1995). An exploration of common ground: integrating evolutionary and strategic theories of the firm. In: Montgomery CA, editor.

- Resource-based and evolutionary theories of them: towards a synthesis. Norwell, MA: Kluwer Academic Publishers.
- Cragg, P., B. & King, M. (1993). Small computing: motivators and inhibitors. *MIS Quarterly*. Vol. 17, No. 1, pp. 47-60.
- Attewell, P. (1992). Technology disunion and organizational learning: the case of business computing. *Organization Science*. Vol. 3, No. 1, pp. 1-19.
- Gable, G., G. (1991). Consultant engagement for computer system selection: a pro-active client role in small businesses. *Information Management* . Vol. 20, No. 2, pp. 83-93.
- Thong J., Y., L., Yap, C., S. & Raman, K., S., (1996). Top management support, external expertise, and information systems implementation in small businesses. *Information Systems Research*. Vol, 7, No. 2, p 248.
- Lees, J., D. (1987). Successful development of small business information systems. *Journal of Systems Management*. Vol. 25 No. 3, p 32.
- Thong, J., Y., L. & Yap, C., S. & Raman, K., S. (1994). Engagement of external expertise in information systems implementation. *Journal of Management Information Systems*. Vol. 11, No. 2, p 209.
- Yap, C., S. (1989). Issues in managing information technology. *Journal of the Operational Research Society*. Vol. 40, No. 7, pp. 649 & 58.
- Jarvenpaa, S., L. & Ives, B. (1991). Executive involvement and participation in the management of information technology. *MIS Quarterly*. Vol. 15, No. 2, pp. 205 & 27.
- Lefebvre, L., A, Harvey, J., & Lefebvre, E. (1991). Technological experience and the technology adoption decisions in small manufacturing, *R&D Management*. Vol. 21, No. 3. Pp. 9-241.
- Heikkila, J., Saarinen, T. & Saaksjarvi. M. (1991). Success of software packages in small businesses: an exploratory study. *European Journal of Information Systems*. Vol. 1. No. 3, pp. 159-69.
- DeLone, W., H, & McLean, E., R. (1992). Information system success: the quest for the dependent variable. *Information Systems Research*. Vol. 3, No. 1, pp. 60-95.
- Nation, J. R. (1997). *Research Methods*. New Jersey: Prentice-Hall Inc.
- Nelson, R., R, & Cheney, P., H. (1987). Educating the CBIS user: a case analysis. *Data Base* Vol. 18, pp. 6- 11.